



The 1st International Symposium on LAPAN-IPB Satellite for Food Security and Environmental Monitoring

Editorial

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Impacts of global environmental changes have been experienced in many parts of the world. The climate change has caused the uncertainties in the agricultural and fisheries production, which in turn affect to the long-term availability of food (food security). Moreover, the pressures on forest resources has increased significantly in recent years, which is characterized by the decreasing of forest cover through the expansion of plantations in combination with the increasing of forest fire events. Moreover, decreasing of agricultural lands as it converted into settlement is essential issue of the food security. Consequently, national strategies for climate change adaptation and mitigation and agricultural sustainability programs are required to tackle the food security and forestry issues in Indonesia.

As a leading university in agriculture in Indonesia, Bogor Agriculture University (IPB) has been conducted various studies related to food security including agriculture, marine and fisheries, forestry, and climate. Since 2010, Bogor Agricultural University (IPB) and the National Institute of Aeronautics and Space of Indonesia (LAPAN) have intended to enhance the role of environmental satellite data in order to more effectively support the research in agricultural, forestry, climate and marine resources. Moreover, LAPAN-IPB collaboration has committed to work together in developing satellite in order to support the food security and environmental monitoring program in Indonesia. The LAPAN-IPB Satellite called "LISAT" is designed and developed by LAPAN, and IPB will be responsible for developing algorithm and datasets application, in order to support the food security and environmental monitoring program.

Through this LAPAN-IPB collaboration, the LISAT task force have organized the 1st International Symposium on LAPAN-IPB Satellite for Food Security and Environmental Monitoring 2014 (LISAT-FSEM 2014), and co-hosted by Bogor Agricultural University (IPB), Directorate of Research and Innovation, IPB (DRI-IPB), Center for Environmental Research, Research and Community Services Institution, IPB (PPLH-LPPM, IPB) and the National Institute of Aeronautics and Space of Indonesia (LAPAN), Indonesia.

The 1st International Symposium on LAPAN-IPB Satellite for Food Security and Environmental Monitoring 2014 (LISAT-FSEM 2014) was held on 25-26 November 2014 at the IPB International Convention Center, Bogor, Indonesia. This symposium is focused on: (1) enhancing beneficial use of satellite technology in the fields of agriculture, forestry, climate change, and marine resources, in terms of food security, which is associated with the estimation of agricultural land and marine resource productivity as well as the system of Monitoring, Reporting and Verification (MRV) of the REDD+ program (Reducing Emissions from Deforestation and Forest Degradation Plus) and (2) to prepare and complete the processing chains of the existing environmental satellite data as well as the LISAT-data utilization from upstream to downstream of the selected locations in accordance with the focus study.

The symposium organizing committee has already received the total of 73 papers for both category of Oral and Poster Presentation, which come from various scientists and students from different institutions. These papers have been reviewed by the scientific committee of LISAT-FSEM. Regarding the peer review of scientific committee, 43 papers have been selected to be published in this Procedia Environmental Sciences, which mostly focused on enhancing the beneficial use of satellite technology in terms of food security in the fields of agriculture, forestry, climate change, and fisheries/marine resources.

Indeed, the result from this symposium will provide useful information from satellite technology in order to support the government's programs for food security and environmental monitoring. Moreover, this symposium will be strengthened the collaboration between multi-institutions and developed a better atmosphere among the different research groups, either for basic research or technology developments.

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